

FILE 'HOME' ENTERED AT 14:14:15 ON 19 DEC 2008

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=> b reg
COST IN U.S. DOLLARS          SINCE FILE      TOTAL
                                ENTRY        SESSION
FULL ESTIMATED COST          0.21          0.21
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FILE 'REGISTRY' ENTERED AT 14:14:32 ON 19 DEC 2008  
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DICTIONARY FILE UPDATES: 18 DEC 2008 HIGHEST RN 1086785-80-9

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<http://www.cas.org/support/stn/gen/stndoc/properties.html>

E => E "SOLIDUM DODECYL SULFATE"/CN 25  
E1 1 SOLIDINE CP 13D/CN  
E2 1 SOLIDINE CS 50/CN  
E3 0 --> SOLIDUM DODECYL SULFATE/CN  
E4 1 SOLDOL E/CN  
E5 1 SOLDUR/CN  
E6 1 SOLDUR 315/CN  
E7 1 SOLDUR 340/CN  
E8 1 SOLDUR 355/CN  
E9 1 SOLDUR 560/CN  
E10 1 SOLDUR 690/CN  
E11 1 SOLDUS/CN  
E12 1 SOLE BLUE 33/CN  
E13 1 SOLE TEGE TS 25/CN  
E14 1 SOLE TERGE 8/CN  
E15 1 SOLEAL/CN  
E16 1 SOLEANA VDA/CN  
E17 1 SOLECRAN/CN  
E18 1 SOLEDON BLUE 2RC/CN  
E19 1 SOLEDON BLUE 2RCX/CN  
E20 1 SOLEDON BLUE 4BC/CN  
E21 1 SOLEDON BLUE IBC/CN  
E22 1 SOLEDON BLUE O 4B/CN  
E23 1 SOLEDON BRILLIANT ORANGE 6R/CN  
E24 1 SOLEDON BRILLIANT PURPLE 2R/CN  
E25 1 SOLEDON BRILLIANT VIOLET 14R/CN

=> E "SOLIUM DODECYL SULFATE"/CN 25  
E1 1 SOLITONIUM/CN

E2        1        SOLIUM/CN  
 E3        0 --> SOLIUM DODECYL SULFATE/CN  
 E4        1        SOLIUS BLUE FG/CN  
 E5        1        SOLIUS BLUE GR/CN  
 E6        1        SOLIUS BORDEAUX 5B/CN  
 E7        1        SOLIUS BRILLIANT VIOLET 2R/CN  
 E8        1        SOLIUS BROWN RT/CN  
 E9        1        SOLIUS BROWN T/CN  
 E10      1        SOLIUS LIGHT BLUE 2FGL/CN  
 E11      1        SOLIUS LIGHT BLUE 6G/CN  
 E12      1        SOLIUS LIGHT BLUE BL/CN  
 E13      1        SOLIUS LIGHT BLUE BR/CN  
 E14      1        SOLIUS LIGHT BLUE BRR/CN  
 E15      1        SOLIUS LIGHT BLUE F 3R/CN  
 E16      1        SOLIUS LIGHT BLUE FBGL/CN  
 E17      1        SOLIUS LIGHT BLUE G/CN  
 E18      1        SOLIUS LIGHT BLUE GL/CN  
 E19      1        SOLIUS LIGHT BROWN 3R/CN  
 E20      1        SOLIUS LIGHT BROWN BRLL/CN  
 E21      1        SOLIUS LIGHT BROWN BRS/CN  
 E22      1        SOLIUS LIGHT BROWN G/CN  
 E23      1        SOLIUS LIGHT BROWN R/CN  
 E24      1        SOLIUS LIGHT BROWN T/CN  
 E25      1        SOLIUS LIGHT GREEN 2B/CN

=> E "SODIUM DODECYL SULFATE"/CN 25

E1        1        SODIUM DODECYL PENTA(OXYETHYLENE) SULFATE/CN  
 E2        1        SODIUM DODECYL PHOSPHATE, (C12H25O)<sub>2</sub>PO/CN  
 E3        1 --> SODIUM DODECYL SULFATE/CN  
 E4        1        SODIUM DODECYL SULFATE HEMIHYDRATE/CN  
 E5        1        SODIUM DODECYL SULFATE HYDRATE (8:1)/CN  
 E6        1        SODIUM DODECYL SULFATE MONOHYDRATE/CN  
 E7        1        SODIUM DODECYL SULPHATE/CN  
 E8        1        SODIUM DODECYL THIOSULFATE/CN  
 E9        1        SODIUM DODECYL TRITHIOCARBONATE/CN  
 E10      1        SODIUM DODECYL-2,3-3H SULFATE/CN  
 E11      1        SODIUM DODECYL-2-SULFATE/CN  
 E12      1        SODIUM DODECYL-O-XYLENESULFONATE/CN  
 E13      1        SODIUM DODECYL-POLYOXYETHYLENE-3-SULFATE/CN  
 E14      1        SODIUM DODECYLAMIDEETHYLSULFOSUCCINATE/CN  
 E15      1        SODIUM DODECYLAMINOMETHANE SULFONATE/CN  
 E16      1        SODIUM DODECYLATE/CN  
 E17      1        SODIUM DODECYLBENZENE SULFATE/CN  
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 E19      1        SODIUM DODECYLBENZENESULFONAMIDOETHYL SULFATE/CN  
 E20      1        SODIUM DODECYLBENZENESULFONAMIDOETHYLSULFONATE/CN  
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 E22      1        SODIUM DODECYLBENZENESULFONAMIDOETHYL SULFATE/CN  
 E23      1        SODIUM DODECYLBENZOSULFONATE/CN  
 E24      1        SODIUM DODECYLDIPHENYL ETHER DISULFONATE/CN  
 E25      1        SODIUM DODECYLDIPHENYL OXIDE DISULFONATE/CN

=> S E3

L1        1 "SODIUM DODECYL SULFATE"/CN

=> l L1 chem  
MISSING OPERATOR

=> sel L1 chem  
E1 THROUGH E236 ASSIGNED

=> b caplus  
COST IN U.S. DOLLARS  
FULL ESTIMATED COST

SINCE FILE ENTRY	TOTAL SESSION
6.89	7.10

FILE 'CAPLUS' ENTERED AT 14:16:08 ON 19 DEC 2008  
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FILE COVERS 1907 - 19 Dec 2008 VOL 149 ISS 26  
FILE LAST UPDATED: 18 Dec 2008 (20081218/ED)

Caplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2008.

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<http://www.cas.org/legal/infopolicy.html>

=> s 151-21-3/biol,uses,ract,anst  
 42653 151-21-3  
 7622391 BIOL/RL  
 12675 151-21-3/BIOL  
 (151-21-3 (L) BIOL/RL)  
 42653 151-21-3  
 7334515 USES/RL  
 22186 151-21-3/USES  
 (151-21-3 (L) USES/RL)  
 42653 151-21-3  
 3206166 RACT/RL  
 1057 151-21-3/RACT  
 (151-21-3 (L) RACT/RL)  
 42653 151-21-3  
 1243006 ANST/RL  
 3641 151-21-3/ANST  
 (151-21-3 (L) ANST/RL)  
L2 31430 151-21-3/BIOL,USES,RACT,ANST

=> s L2 and (protein (2a) a) or spa  
 2243533 PROTEIN  
 1583071 PROTEINS  
 2621233 PROTEIN  
 (PROTEIN OR PROTEINS)  
 22842331 A  
 476556 PROTEIN (2A) A  
 4339 SPA  
 596 SPAS  
 4734 SPA

(SPA OR SPAS)

L3 5624 L2 AND (PROTEIN (2A) A) OR SPA

=> s L3 and staphylococc##  
 87315 STAPHYLOCOCC##

L4 775 L3 AND STAPHYLOCOCC##

=> s L2 (s) (protein (2a) a) or spa  
 PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH  
 FIELD CODE - 'AND' OPERATOR ASSUMED 'L2 (S) '  
 2243533 PROTEIN  
 1583071 PROTEINS  
 2621233 PROTEIN  
 (PROTEIN OR PROTEINS)

22842331 A  
 476556 PROTEIN (2A) A  
 4339 SPA  
 596 SPAS  
 4734 SPA

(SPA OR SPAS)

L5 5624 L2 (S) (PROTEIN (2A) A) OR SPA

=> s L5 (s) staphylococc##  
 PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH  
 FIELD CODE - 'AND' OPERATOR ASSUMED 'L5 (S) STAPHYLOC'  
 87315 STAPHYLOCOCC##

L6 775 L5 (S) STAPHYLOCOCC##

=> s L6 and (skin or derm##### or epiderm##)  
 292358 SKIN  
 11361 SKINS  
 298693 SKIN  
 (SKIN OR SKINS)  
 59957 DERM#####  
 83846 EPIDERM##

L7 35 L6 AND (SKIN OR DERM##### OR EPIDERM##)

=> s L7 and py<2005  
 25117802 PY<2005

L8 13 L7 AND PY<2005

=> d L8 ibib abs 1-13

L8 ANSWER 1 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2004:1071997 CAPLUS <<LOGINID::20081219>>  
 DOCUMENT NUMBER: 142:51899

TITLE: Emergence of Panton-Valentine leukocidin positive  
 community-acquired methicillin-resistant  
 Staphylococcus aureus. Status of infection and  
 bacteriological features

AUTHOR(S): Yamamoto, Tatsuo; Tanike, Ikue; Nakagawa, Saori;  
 Iwakura, Nobuhiro

CORPORATE SOURCE: Division of Bacteriology, Department of Infectious  
 Disease Control and International Medicine, Niigata  
 University Graduate School of Medical and Dental  
 Sciences, Niigata, Japan

SOURCE: Nippon Kagaku Ryoho Gakkai Zasshi (2004),  
 52(11), 635-653  
 CODEN: NKRZE5; ISSN: 1340-7007

PUBLISHER: Nippon Kagaku Ryoho Gakkai

DOCUMENT TYPE: Journal; General Review

LANGUAGE: Japanese  
AB A review. In the United States, children are reported to have died of community-acquired methicillin-resistant *Staphylococcus aureus* (CA-MRSA) infection between 1997 and 1999. During the same period, CA-MRSA was also isolated and reported in Europe and Australia. The characteristics of the pathogen were clarified, and CA-MRSA infection became the focus of global attention as a global infection. CA-MRSA differs from conventional MRSA (hospital-acquired MRSA, HA-MRSA) in origin. It produces a leukocidin, PVL, and in many cases, has a type IV methicillin-resistance region (type IV SCCmec). Genetically, CA-MRSA consists of several different continent-specific clones. Anal. such as multi-locus sequence typing (MLST), spa typing, agr allele anal., and toxin gene pattern anal. are used. One clone has thus far been confirmed in Europe, several in the United States, 2 in Oceania, and 2 prevalent in Asia. Drug sensitivity depends on the type of prevalent clone, and some strains of CA-MRSA are susceptible to many antimicrobial agents other than penicillin/cephalosporins. In many cases, such CA-MRSA is associated with skin/soft tissue infection, and is frequently detected in children. Fatal necrotizing pneumonia and bacteremia appear to the increasing. CA-MRSA in Japan differs from European and North American cases in that; the proportion of PVL-neg. strains is relatively high and genetic features vary. PVL-pos. CA-MRSA, which is rarely isolated, is common to Oceania CA-MRSA in many respects, although not identical, rather than to European and North American CA-MRSA. PVL-pos. CA-MRSA infection is spreading even among young, healthy individuals. A survey on the worldwide distribution, identification of populations and areas at high risk for colonization and infection, and anal. of the detailed infectious mechanism are currently under way.

L8 ANSWER 2 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2004:1037340 CAPLUS <>LOGINID::20081219>>  
DOCUMENT NUMBER: 1414:420399  
TITLE: Method of screening inhibitor by using induction of interleukin 18 production by keratinocyte, method of inducing atopic dermatitis-like symptom and utilization of the same  
INVENTOR(S): Nakanishi, Kenji; Mizutani, Hitoshi; Tsutsui, Hiroko  
PATENT ASSIGNEE(S): Japan Science and Technology Agency, Japan  
SOURCE: PCT Int. Appl., 49 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004104578	A1	20041202	WO 2004-JP5747	20040421 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EEE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2004241513	A1	20041202	AU 2004-241513	20040421 <--
AU 2004241513	B2	20070920		

CA 2523297	A1	20041202	CA 2004-2523297	20040421 <--
EP 1635176	A1	20060315	EP 2004-728686	20040421
R: CH, DE, FR, GB, IT, LI				
CN 1777807	A	20060524	CN 2004-80010993	20040421
US 20070092448	A1	20070426	US 2005-554301	20051024
AU 2007242943	A1	20080110	AU 2007-242943	20071212
KR 2008049851	A	20080604	KR 2008-710777	20080502
PRIORITY APPLN. INFO.:				
JP 2003-120630 A 20030424				
AU 2004-241513 A3 20040421				
WO 2004-JP5'747 W 20040421				
KR 2005-720134 A3 20051022				

AB It is intended to provide various methods appropriately usable in clarifying the onset mechanism of atopic dermatitis (AD) and symptoms similar thereto and a remedy therefor with the use of the phenomenon of inducing the production of interleukin 18 (IL-18) by keratinocytes (KC) and methods of utilizing the same. IgE expression at a high level in the serum, which is observed in an AD-like lesion, can be reproduced by, for example, applying *Staphylococcus aureus*-origin protein A (SpA) on mouse skin or the like or transplanting a skin piece having an AD-like inflammatory lesion to a mouse or the like. Thus, it becomes possible to screen, for example, an inhibitor of the induction of IL-18 production by KC.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 3 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2004:246631 CAPLUS <>LOGINID::20081219>>  
 DOCUMENT NUMBER: 140:386770  
 TITLE: Distribution of virulence genes of *Staphylococcus aureus* isolated from stable nasal carriers  
 AUTHOR(S): Nashev, Dimitar; Toshkova, Katia; Salasia, S. Isrina O.; Hassan, Abdulwahed A.; Lammier, Christoph; Zschock, Michael  
 CORPORATE SOURCE: National Center of Infectious and Parasitic Diseases, Sofia, 1504, Bulg.  
 SOURCE: FEMS Microbiology Letters (2004), 233(1), 45-52  
 CODEN: FMLED7; ISSN: 0378-1097  
 PUBLISHER: Elsevier Science B.V.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB In the present study, we report data on virulence determinants of *Staphylococcus aureus* from stable nasal carriers, emphasizing on the genes encoding fibronectin (fnbA, fnbB) and collagen (cna) adhesive mols. Of the 44 *S. aureus* isolates included, 32 isolates (16 pairs) were cultured from the anterior nares of 16 healthy carriers, eight isolates (four pairs) were collected from the nose of four patients with recurrent skin infections and four isolates were obtained from the infection site of these patients. The period between the two nasal swabs taken was 3-5 days. The persistency of carriage could be demonstrated by the indistinguishable genotypic characteristics of the *S. aureus* isolates in each pair. This could be shown by determination of gene polymorphisms of coa gene

and the X-region and IgG-binding region encoding segments of spa gene. In addition, the isolates within the pairs showed identical toxin patterns. This was determined by PCR amplification of the genes encoding staphylococcal enterotoxins (SEA to SEJ) and TSST-1. The genotypic properties also yielded an identity between persistent nasal carriage isolates and the corresponding skin infection isolates

of the four patients. In addition, all *S. aureus* nasal and skin infection isolates were pos. for gene fnbA, fnbB and cna could be found with a high frequency. Among the 44 isolates investigated, 16 isolates (36.7%) harbored gene fnbB and 21 isolates (47.7%) gene cna. The data in the present study showed a relatively wide distribution of the genes fnb and cna among the investigated isolates, indicating that the persistent carriage of strains harboring these virulence determinants may increase the risk for subsequent invasive infections in carriers.

REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 4 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2003:610641 CAPLUS <<LOGINID::20081219>>  
 DOCUMENT NUMBER: 139:160763  
 TITLE: Hybrid plasmid pZSZA coding the synthesis of angiogenin protein and *Escherichia coli* BL21 (DES) pZSZA strain as the superproducer of the recombinant chimeric protein of human angiogenin  
 INVENTOR(S): Ramazanov, Yury Akhmetovich; Mertvetsov, Nikolai Pavlovich; Maistrenko, Valentina Fedorovna  
 PATENT ASSIGNEE(S): Russia  
 SOURCE: PCT Int. Appl., 24 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Russian  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003064660	A1	20030807	WO 2003-RU49	20030130 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KE, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
RU 2221043	C2	20040110	RU 2002-102856	20020131 <--
US 20050148061	A1	20050707	US 2004-502554	20040722
PRIORITY APPLN. INFO.:			RU 2002-102856	A 20020131
			WO 2003-RU49	W 20030130

AB The invention relates to biotechnol. and increases the expressive efficiency of a hybrid gene and the stability of an angiogenin protein and makes it possible to clean by affinity a chimeric protein on IgG-sorbents. The engineered hybrid plasmid pZSZA coding the synthesis of the chimeric angiogenin protein which has a mol. mass of 3.814, a megadalton (Md) (6192 p.o.), contains as follows: -XhoI/EcoRI-of the fragment of the plasmid DNA pGM280 (3720 p.o.); -EcoRI/EcoNI of the fragment of the PfM plasmid (2500 p.o.); - tandem of promoters of a tryptophan operon E.coli; -synthetic chimeric angiogenin gene (Ang), combined with Spa; -genetic marker- gene bla beta-lactamase which dets. the stability of the transformed plasmids pZSZA of *E.coli* cells to ampicillin; -unique sites for recognizing with the aid of restricting endonucleases which are disposed at the following distances to the right of the EcoRI site (192 p.o.) with the following coordinates: EcoRI-192p.o., XbaI-276 p.o., Bgl II-342 p.o., SphI-539 p.o., EcoNI-599 p.o., MluI-1064 p.o. The *Escherichia coli* BL21 (DES) pZSZA MCKM B-127 strain is the superproducer of recombinant chimeric

protein-angiogenin.  
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 5 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2003:494570 CAPLUS <>LOGINID::20081219>>  
DOCUMENT NUMBER: 139:194200  
TITLE: Alternative roles of ClpX and ClpP in *Staphylococcus aureus* stress tolerance and virulence  
AUTHOR(S): Frees, Dorte; Qazi, Saara N. A.; Hill, Philip J.; Ingmer, Hanne  
CORPORATE SOURCE: Department of Veterinary Microbiology, Royal Veterinary and Agricultural University (KVL), Frederiksberg C, DK-1870, Den.  
SOURCE: Molecular Microbiology (2003), 48(6), 1565-1578  
CODEN: MOMIEE; ISSN: 0950-382X  
PUBLISHER: Blackwell Publishing Ltd.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB Clp proteolytic complexes are essential for virulence and for survival under stress conditions in several pathogenic bacteria. Recently, a study using signature-tagged mutagenesis identified the ClpX ATPase as also being required for virulence in *Staphylococcus aureus*. Presently, we have constructed deletion mutants removing either ClpX or the proteolytic subunit, ClpP, in *S. aureus* 8325-4 in order to examine a putative link between stress tolerance and virulence. When exposed to stress, we found that, although *clpP* mutant cells were sensitive to conditions generating misfolded proteins, the absence of ClpX improved survival. In the presence of oxidative stress or at low temperature, both ClpP and ClpX were important for growth. Virulence was examined in a murine skin abscess model and was found to be severely attenuated for both mutants. *S. aureus* pathogenicity is largely dependent on a set of extracellular and cell wall-associated proteins. In the mutant cells, the amount of  $\alpha$ -hemolysin (*hla*) and several other extra-cellular proteins was greatly decreased, and anal. of *hla* expression revealed that the reduction occurred at the transcriptional level. Essential for transcriptional regulation of *hla* is the quorum-sensing *agr* locus. Interestingly, the absence of ClpX or ClpP reduced both transcription of the *agr* effector mol., RNA III, and the activity of the autoinducing peptide (AIP). In addition, ClpX was required independently of ClpP for transcription of *spa* encoding Protein A. Thus, our results indicate that ClpX and ClpP contribute to virulence by controlling the activity of major virulence factors rather than by promoting stress tolerance.

REFERENCE COUNT: 74 THERE ARE 74 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 6 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2003:325050 CAPLUS <>LOGINID::20081219>>  
DOCUMENT NUMBER: 139:83790  
TITLE: Persistent secretion of IL-18 in the skin contributes to IgE response in mice  
AUTHOR(S): Nakano, Hiroki; Tsutsui, Hiroko; Terada, Makoto; Yasuda, Koubun; Matsui, Kiyoshi; Yumikura-Futatsugi, Shizue; Yamamoto, Kei-Ichi; Mizutani, Hitoshi; Yamamura, Takehira; Nakanishi, Kenji  
CORPORATE SOURCE: Department of Immunology & Medical Zoology, Hyogo College of Medicine, Nishinomiya, 663-8501, Japan  
SOURCE: International Immunology (2003), 15(5), 611-621

CODEN: INIMEN; ISSN: 0953-8178  
PUBLISHER: Oxford University Press  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB After exposure of the skin to microbes, the host develops skin-specific inflammation and an acquired immune response, in which keratinocytes (KC) and Langerhans cells play critical roles resp. We established two animal models. First, we examined the importance of KC-derived IL-18 for the systemic IgE response by using a skin transplantation model. As previously reported, transgenic mice (KCASPItg), that over-express caspase-1 in their KC, display high serum levels of IgE, and spontaneously develop chronic dermatitis by production of IL-18 and IL-1 $\beta$ . We examined the capacity of transplantation of cutaneous lesions from KCASPItg to induce IgE production in wild-type or mutant mice with a syngeneic background. Transplantation of active cutaneous lesions, that expressed high levels of IL-18 and IL-1 $\beta$ , induced long-lasting IgE production in wild-type mice without elevation of circulating IL-18 and IL-1 $\beta$ . Furthermore, IL-18R-, CD4- or stat6-deficient mice transplanted with the lesions did not produce IgE, indicating that this IgE response is initiated by IL-18, and dependent on host-derived CD4+ T cells and stat6. Second, we investigated IL-18 secretion from KC upon stimulation with microbe products. Freshly isolated KC from wild-type mice secreted IL-18 in response to Protein A purified from Cowan I strain of *Staphylococcus aureus* (SpA), which often exacerbates human skin diseases, including atopic dermatitis. Cutaneous application of SpA increased serum levels of IL-18 and IgE. These results indicate that local accumulation of IL-18 triggers systemic IgE responses without exposure to antigen.

L8 ANSWER 7 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2001:591683 CAPLUS <<LOGINID::20081219>>  
TITLE: The significance of nasal carriage of  
Staphylococcus aureus as risk factor for human  
skin infections  
AUTHOR(S): Toshkova, K.; Annemuller, C.; Akineden, O.; Lammler,  
C.  
CORPORATE SOURCE: National Center of Infectious and Parasitic Diseases,  
Sofia, Bulg.  
SOURCE: FEMS Microbiology Letters (2001), 202(1),  
17-24  
CODEN: FMLED7; ISSN: 0378-1097  
PUBLISHER: Elsevier Science B.V.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB The present study was designed to investigate the significance and the relationship between nasal carriage of *Staphylococcus aureus* and staphylococcal skin infections. Thirty-one S. aureus strains, isolated from 12 patients with chronic and recurrent skin infections, one patient with septicemia and one patient with otitis externa were studied. The staphylococcal strains were isolated from the site of infection and from the anterior nares of each patient. The identity of both strains of each pair could be demonstrated by determination of phenotypic properties and by genotyping of the isolates. The phenotypic properties included hemolytic activities, antibiotic resistance data, and the production of enterotoxins. The identity was addnl. confirmed by phage-typing, by determination of the size and the number of repeats of the

X region of spa gene, by determination of gene polymorphisms of coa gene and by macrorestriction anal. of the chromosomal DNA of the isolates by

pulsed-field gel electrophoresis. The present results showed an identity of the *S. aureus* obtained from anterior nares and from skin infection of each patient indicating the importance of nasal carriage of these bacteria for development of human skin infection.

REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 8 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2001:306940 CAPLUS <<LOGINID::20081219>>  
DOCUMENT NUMBER: 134:306052  
TITLE: Evaluation of bacteriological characteristics for  
clonal typing of *Staphylococcus aureus*  
isolated from clinical sources  
AUTHOR(S): Tachi, Hideki; Sakurada, Junji; Hirota, Yasuhisa;  
Seki, Keiko  
CORPORATE SOURCE: Dep. Microbiol. (II), The jikei Univ. Sch. Med., Japan  
SOURCE: Tokyo Jikeikai Ika Daigaku Zasshi (2001),  
116(2), 111-119  
CODEN: TJIDAH; ISSN: 0375-9172  
PUBLISHER: Tokyo Jikeikai Ika Daigaku Seikai  
DOCUMENT TYPE: Journal  
LANGUAGE: Japanese  
AB New markers for clonal identification of *Staphylococcus aureus* strains were devised. The  $\gamma$ -hemolysin gene locus was classified as "normal" or "abnormal" according to the product pattern of polymerase chain reaction (PCR). Protein A genes were classified into 5 types with PCR and into 10 subtypes with Hing III digestion. The Panton-Valentine leucocidin gene was also used as a new marker with PCR. Interestingly, only some of strains which had "abnormal"  $\gamma$ -hemolysin genes also had the Panton-Valentine leucocidin gene. To confirm the usefulness of these new markers, they were used with conventional counterparts, including coagulase serotyping, producibility of enterotoxins, toxic shock syndrome toxin-1, and PCR detections of exfoliative toxin genes, to investigate bacteriolog. profiles of strains isolated from healthy volunteers and patients with atopic dermatitis.

L8 ANSWER 9 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1998:608280 CAPLUS <<LOGINID::20081219>>  
DOCUMENT NUMBER: 129:301239  
ORIGINAL REFERENCE NO.: 129:61422a  
TITLE: Role of *Staphylococcus aureus*  
surface-associated proteins in the attachment to  
cultured HaCaT keratinocytes in a new adhesion assay  
AUTHOR(S): Mempel, Martin; Schmidt, Tanja; Weidinger, Stephan;  
Schnopp, Christina; Foster, Timothy; Ring, Johannes;  
Abeck, Dietrich  
CORPORATE SOURCE: Department of Dermatology and Allergy, Munich, Germany  
SOURCE: Journal of Investigative Dermatology (1998),  
111(3), 452-456  
CODEN: JIDEAE; ISSN: 0022-202X  
PUBLISHER: Blackwell Science, Inc.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB Colonization of human skin with *Staphylococcus aureus* is a common feature in a variety of dermatol. diseases. In order to reproducibly investigate the adherence of *Staphylococcus aureus* to human epidermal cells, an *in vitro* assay was established using the biotin/streptavidine labeling system and the HaCaT cell line. This assay was used to define the role of several *Staphylococcus aureus* surface proteins with regard to their function in the staphylococcal adhesion process. Our studies

included the standard laboratory strain Newman as well as its genetically constructed mutants DU5873, DU5852, DU5854, and DU5886 generated by allele replacement or transposon mutagenesis, which are deficient in the elaboration of staphylococcal protein A (spa), clumping factor (clfA), coagulase (coa), and the fibronectin-binding proteins A and B (fnbA/B), resp. In comparison with strain Newman all mutants showed remarkably reduced adherence to the HaCaT keratinocyte cell line in our assay, yielding only between 43% and 60% of the adherence capacity of strain Newman after 60 min. Bacterial adherence could be re-established by introducing the cloned wild-type genes for the surface proteins on shuttle plasmids into the chromosomally defective mutants, thus suggesting a pathogenetic role of these proteins in the attachment of *Staphylococcus aureus* to human keratinocytes. Bacterial adherence was addnl. enhanced by alkaline pH values that are characteristic for skin conditions with epidermal barrier dysfunction. The use of *Staphylococcus aureus* mutant strains, deficient in the elaboration of defined proteins, allows specific investigation of colonization and virulence factors of this dermatol. relevant microorganism.

REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 10 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1998:4737 CAPLUS <>LOGINID::20081219>>  
DOCUMENT NUMBER: 128:79872  
ORIGINAL REFERENCE NO.: 128:15523a,15526a  
TITLE: Altered immune response to staphylococcal antigens in long-lasting implanted mice  
AUTHOR(S): Sadowska, Beata; Zoladek, Joanna; Ljungh, Asa;  
Rudnicka, Wieslawa; Rozalska, Barbara  
CORPORATE SOURCE: Dep. Infectious Biol., Inst. Microbiol. Immunol.,  
Univ. Lodz, Pol.  
SOURCE: Acta Microbiologica Polonica (1997), 46(3),  
253-261  
CODEN: AMPOAX; ISSN: 0137-1320  
PUBLISHER: Polskie Towarzystwo Mikrobiologow  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB Staphylococcal infections constitute one of the main problems associated with clin. applications of various prosthetic medical devices (biomaterials). As the magnitude of the infection risk depends often on the duration of device installation, and the incidence of infections is higher in skin-penetrating devices, we studied some parameters of specific immune response to staphylococcal antigens in mice s.c. implanted for three months with heparinized polyethylene (H-PE). Three weeks before the evaluation of immune response, mice (implanted and non-implanted) were s.c. infected with 10<sup>7</sup> of *Staphylococcus aureus* Cowan 1. The proliferation of lymph node cells was determined on the basis of 3H-thymidine incorporation in 3-days cultures stimulated with: staphylococcal lipoteichoic acid (LTA), protein A (SpA),  $\alpha$ -toxin, or with phytohemagglutinin (PHA). Moreover, the levels of specific antibodies to staphylococcal antigens were determined in serum samples (ELISA against: LTA, SpA,  $\alpha$ -toxin). The data obtained indicate that long-lasting implantation caused evident changes in proliferative activity of lymphocytes and humoral response to staphylococcal antigens. It enhances  $\alpha$ -toxin and LTA stimulated proliferation of lymph node lymphocytes in vitro. In contrast, H-PE-implanted animals demonstrated a significant decrease in the production of anti-SpA IgG2a and IgG2b and increase in the synthesis of anti-LTA IgG1 antibodies.

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 11 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1987:47614 CAPLUS <<LOGINID::20081219>>  
DOCUMENT NUMBER: 106:47614  
ORIGINAL REFERENCE NO.: 106:7853a,7856a  
TITLE: Selective binding of colloidal gold-protein conjugates  
to epidermal phosphorus-rich keratohyaline  
granules and cornified cells  
AUTHOR(S): Jessen, Harry; Behnke, Olav  
CORPORATE SOURCE: Inst. Anat. C, Univ. Copenhagen, Copenhagen, DK-2200,  
Den.  
SOURCE: Journal of Investigative Dermatology (1986),  
87(6), 737-40  
CODEN: JIDEAE; ISSN: 0022-202X  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB Colloidal Au solns. conjugated with staphylococcal protein A (SpA) are widely used in high-resolution immunocytochem. studies to visualize antibodies bound at antigenic sites. Colloidal Au solns. conjugated with SpA, bovine serum albumin (BSA), or gelatin bound selectivity to structures in glutaraldehyde-fixed, plastic-embedded epidermis of rabbit, mouse, and human. Two types of keratohyaline granules (KGs) are present in epidermis, a P-rich (PR) and a S-rich (SR) type. The PR KGs were strongly labeled with Au particles, whereas SR KGs or other structures in the living cells of epidermis were unlabeled. The PR KGs are assumed to be precursors of the matrix protein of cornified cells, and intense Au labeling occurred over the lower layer of cornified cells (i.e., stratum lucidum). More superficial cornified cells were weakly labeled or unlabeled. The Au labeling pattern was identical whether SpA, BSA, or gelatin was used to stabilize the colloidal Au solution. The mechanism of binding of protein-conjugated Au to PR KGs and matrix protein of cornified cells is not clear. It is speculated that the charged Au particles are not completely coated by the stabilizing protein, allowing for an electrostatic interaction with charged proteins in sections of cells.

L8 ANSWER 12 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1986:586868 CAPLUS <<LOGINID::20081219>>  
DOCUMENT NUMBER: 105:186868  
ORIGINAL REFERENCE NO.: 105:30093a,30096a  
TITLE: Non-specific binding of protein-stabilized gold sols  
as a source of error in immunocytochemistry  
AUTHOR(S): Behnke, Olav; Ammitzboell, Thorkild; Jessen, Harry;  
Klokker, Mads; Nilausen, Karin; Tranum-Jensen,  
Joergen; Olsson, Lennart  
CORPORATE SOURCE: Inst. Atat., Univ. Copenhagen, Copenhagen, Den.  
SOURCE: European Journal of Cell Biology (1986),  
41(2), 326-38  
CODEN: EJCBDN; ISSN: 0171-9335  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB The observation that protein-A conjugated Au sols bound to fibronectin-collagen (FNC) fibers in human fibroblast cultures prompted a series of studies on the binding of Au particles stabilized in various ways [Staphylococcal protein A, bovine serum albumin, avidin, streptavidin, gelatin, Hb, polyethylene glycol (mol. weight 20,000), methylcellulose, and the nonionic detergent Tween 20] to cell and tissue components, to protein dot blots and SDS-PAGE blots on nitrocellulose paper. Binding of Au particles to certain cell and tissue components and to various immobilized proteins was found to occur irresp. of the

stabilizing agent. It is argued that, albeit Au sols are stabilized against salt coagulation by adsorption of proteins and other stabilizing agents, naked ares are (constantly or intermittently) present on particle surfaces, available for interaction with cell and tissue components that have a high electrostatic affinity for the charged Au surface under prevailing exptl. conditions. Nonspecific binding may be reduced or abolished by competing protein (i.e., proteins with a higher affinity for Au than any component in the object studied) provided the proteins and the Au conjugate are present concomitantly during incubation. It was found that gelatin (Bloom number 30-100) was an effective competitive protein, probably due to its high affinity for Au over a wide pH range. Further, gelatin did not appreciably inhibit the specific interaction in dot blots between SpA and IgG except at very low IgG concns. A protocol for the use of Au protein conjugates to circumvent the hazards of unspecific Au binding is suggested.

L8 ANSWER 13 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 19861475153 CAPLUS <>LOGINID::20081219>>  
DOCUMENT NUMBER: 105:75153  
ORIGINAL REFERENCE NO.: 105:12145a,12148a  
TITLE: Highly sensitive immunoadsorption procedure for  
detection of low-abundance proteins  
AUTHOR(S): Platt, Emily J.; Karlsen, Kinley; Lopez-Valdivieso,  
Alejandro; Cook, Paul W.; Firestone, Gary L.  
CORPORATE SOURCE: Dep. Physiol.-Anat., Univ. California, Berkeley, CA,  
94720, USA  
SOURCE: Analytical Biochemistry (1986), 156(1),  
126-35  
DOCUMENT TYPE: CODEN: ANBCA2; ISSN: 0003-2697  
LANGUAGE: Journal  
English  
AB A procedure that virtually eliminates nonspecific adsorption of  
radiolabeled proteins during immunopptn. was devised utilizing  
staphylococcal cells containing protein A (Staph  
A). Immunoppts. (antigen-antibody complexes) were solubilized  
from Staph A pellets into detergent micelles by incubation in a small volume  
of 1% SDS at 23° for 10 min. To allow reformation of  
immunocomplexes and rebinding to new Staph A, the SDS-solubilized material  
was diluted 20-fold in buffer containing 1% Triton X 100 and 0.5% Na  
deoxycholate. Specific conductance measurements revealed that this  
solubilization and subsequent reimmunoadsorption of antibody-antigen  
complexes occur at SDS concns. that are 1st above and then below its critical  
micelle concentration. This procedure lowered the nonspecific background from  
.apprx.2250 ppm to <25 ppm with a final recovery of 30-50% depending on  
the antigen and antibody. Chaotropic agents such as 2M urea, 0.2M KOH,  
and 3.5M MgCl<sub>2</sub> (as well as combinations of urea and SDS) can substitute  
for 1% SDS, although the final recovery is somewhat lower. Fluorog. of  
radiolabeled proteins obtained in this manner displays virtually  
undetectable background even for exposures as long as 2 mo. These methods  
allowed the unambiguous detection of low-abundance antigens at a high  
level of sensitivity, for example, mouse mammary tumor virus protein  
products and epidermal growth factor receptor.